

## ABSTRACT

An electrode composite body including a conductive polymer film in which the doping and dedoping capacities of the conductive polymer are improved, an electrolyte, and a redox capacitor including those are provided. The object is achieved by the followings: (1) an electrode composite body including a conductive polymer and an electrode for redox capacitors; (2) an electrode composite including a conductive polymer film and an electrode body for redox capacitors; (3) an electrolyte for redox capacitors that contains an ionic liquid as an essential component; (4) a redox capacitor composed of an electrolyte containing an ionic liquid as an essential component and an electrode composite body for redox capacitors; and (5) a composite body in which the anionic component contained in the ionic liquid and is the same component as a part of the dopant of the conductive polymer.